THE NATIONAL CITY BANK OF NEW YORK

1933

Economic Conditions
Governmental Finance
United States Securities

New York, March, 1933

Resignation of C. E. Mitchell as Chairman of The National City Bank of New York

The resignation of Charles E. Mitchell as Chairman and director of The National City Bank of New York and its affiliated organizations was submitted February 27 to a special meeting of the Board of Directors of the Bank. Mr. Mitchell's letter of resignation read as follows:

"New York, February 26, 1933.

"To the Board of Directors of
The National City Bank of New York

"Gentlemen:

"My first loyalty is to The National City Bank of New York to which I have given the best years of my life, and I am not willing that the criticism which has been directed at me as the result of public misunderstanding of testimony given in ex parte hearings before the Senate Committee on Banking and Currency during the past week shall react upon the institution on my account. The subjects dealt with related in the main to events of the years 1928, 1929 and 1930, a period which has passed into history, and chiefly concerned activities of The National City Company, the Bank's securities affiliate, which have little or no relation to conditions of the present day. As the chief executive officer of The National City Company as well as of the Bank, I personally have been brought under a cloud of criticism from which I conceive that the institution should not be permitted to suffer by my continuance in office.

"It is therefore with deep regret but at the same time with satisfaction that the way of service to the institution is open to me, that I ask you to accept my resignation as a director and as Chairman of The National City Bank of New York, which resignation applies as well to my similar positions in the affiliated and subsidiary companies.

"I am sure that this elimination of my personality will not in the slightest degree affect the loyalty and devotion to service of the officers and employes who have been my associates in this great National City institution. Its financial strength is such that it needs no restatement by me, but it will always be my deepest source of pride.

Yours truly,

(signed) C. E. MITCHELL."

The resignation of Hugh B. Baker as President of The National City Company and as a director of the Bank, which was tendered in the same spirit, was accepted on the same day.

Following acceptance of Mr. Mitchell's resignation, the Board of Directors elected James H. Perkins, President of the City Bank Farmers Trust Company, the trust unit of the National City organization, Chairman of the Board of Directors of The National City Bank of New York.

At an interview following these meetings, Mr. Perkins said that the primary business of the Bank is to serve the domestic and foreign commerce and industry of the United States in the field of commercial banking along the same lines as in the past. When asked about the future of The National City Company, he said that "pending legislative determination of the status of securities affiliates, the policy would be to confine the Company's activities to government, state, municipal and corporate bonds of the highest character."

Mr. Perkins' first business connection was with Walter Baker & Co. Ltd., chocolate manufacturers, where in seven years he rose to an executive post. His interest in banking asserted itself and he joined the staff of the American Trust Company of Boston. He later became a vice president and then president of the National Commercial Bank of Albany. From that institution he came to the National City Bank as a vice president and then executive manager.

With America's entrance into the World War Mr. Perkins went to France, assuming complete control of this country's European Red Cross organizations. In September, 1918, he became a Lieutenant Colonel in the A. E. F.

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and was assigned to general headquarters at Chaumont as assistant chief of staff of the Second Army, later of the Third Army, or Army of Occupation at Coblenz. He received the Distinguished Service Medal.

Mr. Perkins was elected president of the Farmers Loan and Trust Company on June 16, 1921, and when that institution became affiliated with the National City Bank on June 29, 1929, under the name City Bank Farmers Trust Company he continued as President and also became a director of the National City Bank.

General Business Conditions

The emergence of widespread and critical banking difficulties in many sections of the country, culminating in the limitation of bank payments throughout Michigan and Maryland and in a number of other important areas, has been the chief influence in the business situation in February. Following the difficulties in Chicago last June, the country experienced a half-year of comparative freedom from banking disturbance, during which the situation in general was one of order and slow improvement. But after the first of this year an increasing number of failures occurred among small banks; and the declaration of a banking holiday in Michigan unsettled confidence in other localities, and led to withdrawals of a magnitude requiring this drastic emergency action.

With confidence disturbed by these developments, the security markets have been under pressure, and any general business improvement has naturally been out of the question.

The Banking Situation

The banking difficulties are not new in origin, but are of the same character as those experienced in other areas earlier in the depression. The fundamental cause of trouble goes back to the wartime rise in prices and wages and inflation of credit. This established a level of values which as people became accustomed to it seemed to be real and permanent, and a great volume of indebtedness was created upon the basis of those values. When it turned out that they were inflated, the decline in prices and in property and investment values left the new indebtedness without adequate support. In many cases the position of banks, subject to call for repayment of their deposits upon demand or short notice, and at the same time unable to collect their loans, or cash in their investments without severe loss, became a most difficult one. Even where excessive long-term commitments had been avoided, and an adequate percentage of well-secured loans of short maturity was held, many borrowers have been unable to make their payments promptly, leaving no choice other than to extend their loans, to collect them with the inevitable consequences of bankruptcies, foreclosures or sacrifice sales of collateral, or to take losses upon them.

In the chief money centers, where the largest institutions with the most diversified assets are found, the trend throughout the depression has been toward increased liquidity, and these banks are in an impressively strong position. Taking the New York City banks as an illustration, they held at the end of 1932 cash items, United States government securities, and demand loans to brokers (equivalent to cash) equalling nearly 65 per cent of their deposits, without counting commercial loans eligible for rediscount at the Reserve Bank, for which no figure is available. This increase in liquidity has been subject to mistaken criticism, such as the charge that banks are hoarding. But it is a fortunate thing that the principal banks in the centers have maintained themselves above suspicion, making them elements of strength and support in the situation.

Manifestly, however, a substantial proportion of the country's banks, caught in the decline of values, have been unable to put themselves in a liquid position. Thus a "frozen" condition of bank credit exists in many localities, the term signifying that an undue proportion of the assets of the banks cannot be converted into cash without forced sale and severe losses. The impact upon banks in such condition of a panicky demand by depositors for repayment of their funds at once becomes insupportable.

To meet this situation the Reconstruction Finance Corporation was organized, and on January 31, 1933 had loaned approximately $900,000,000 to banks and trust companies, of which nearly $300,000,000 had been repaid. This assistance has been invaluable in supplying banks with liquid funds against their slow assets, enabling them to meet withdrawals and averting the spread of panic. But the continued decline in business earnings, commodity prices, and in the value of real estate, the chief cause of recent troubles, has made the situation one of continued difficulty. The publication of the names of banks borrowing from the R. F. C. has contributed to the unsettlement, and President Hoover has acted constructively in asking Congress to stop this practice.

Of course, the attitude of the people in any locality is a very important consideration in the banking situation there. Every individual has a responsibility to meet, for in times of stress every individual contributes by word or action either to the stability or instability of the economic situation. Under the strain of the depression, with evidences of distress on every hand, the instinct of self-protection, which inspires fear and distrust and is destruc-

tive of order and cooperation, is always near the surface; and this is a factor of unsettlement along with the menace of ignorance and of rumor-mongering.

Fortunately, the sense of order and restraint of the American people, which has temporarily deserted them on other occasions during this depression, and has quickly been recovered, never deserts them for long. As a rule their understanding that banking is a public service requiring the cooperation of the public is of a high order. In their own interest, both as depositors and borrowers, they do not for very long refuse to give their cooperation.

Under conditions of order and stability, steady progress can be made in overcoming the difficulties in the banking situation. Unsound banks will be eliminated or reorganized in orderly fashion, and funds accumulated out of earnings or refinancing to apply against the losses of the depression. Banks made encouraging progress along these lines during the second half of 1932. When depositors take alarm, however, this kind of careful reconstruction, analogous to that which all industry is carrying on, becomes impossible, and measures to support the situation become necessary.

Limitations on Payments

It was not to be expected that after the Michigan holiday the banks in the State whose assets were currently unrealizable could at once reopen and pay out without either additional liquid funds or some limitation upon withdrawals, and the way selected was to enforce such a limitation, while planning reorganization and refinancing in certain cases. The essence of the limitation laid down by the Governor is that depositors may withdraw (but only for necessary uses) a part of their deposits proportioned to the cash on hand, available reserves, and United States Government securities held by the bank. Thus that portion of the deposit which is deemed to be covered by slow assets need not be repaid until such assets can be converted into cash or other liquid items. New deposits naturally are withdrawable in full.

This device permits the banks to remain open, and to operate upon their quick assets. The legislatures of a number of States have quickly passed laws embodying the principle of this limitation, the usual form being to make it applicable to individual banks in the discretion of the Banking Commissioner; and the Congress has promptly passed a bill authorizing the Comptroller of the Currency to apply to national banks within a State any emergency measures affecting State banks.

Following the Chicago failures last June, uneasiness developed in some parts of the Middle West, and the situation was met by a similar limitation on withdrawals, but on a voluntary basis. Depositors were asked for waivers of the right to withdraw deposits for a stated time, usually three years, and the campaigns to obtain these waivers were generally successful. The Michigan arrangement lacks the advantage of being voluntary, but under the circumstances it would have been impracticable to act except through the law, and inequitable not to treat all depositors alike. Whether their waiver of the right of withdrawal is voluntary or enforced, the depositors understand that their cooperation is necessary to the functioning of the banking system, and that if in a frenzy of panic they should pull down the banks, a state of complete business demoralization and greater loss to themselves would result. Measures to avert such a disastrous outcome, and to stabilize the situation in each locality as rapidly as may be, impose hardships only in the common good.

Importance of An Economic Program

Incomparably the most important consideration in the situation is that banking conditions are not independent of general business conditions. The best program for overcoming the banking difficulties is a program to overcome the political and economic difficulties which are prolonging this depression, subjecting the people to a distress under which they give way to a disorderly alarm, and delaying recovery in the value of the banking assets.

One year ago at about this time the United States was passing through a period of unsettlement and disturbance to confidence of which the causes were the unbalanced Federal budget; the agitation of the bonus payment proposal, threatening the money standard; and the apparent deadlock in the controversy upon reparations. The effect of this disturbance was a flight of capital to safety out of active employment in the markets, out of the banks, and even out of the country. All this led to a period of acute financial difficulty, evidenced by banking troubles, currency hoarding and gold shipments. But the crisis was successfully surmounted and a general, rapid and vigorous recovery followed when the causes of the disturbance were removed, through passage of the tax and economy measures by Congress, defeat of the bonus proposal, and adoption of the Lausanne agreement upon reparations.

The conditions of one year ago now have their counterpart again. The evidences of alarm are the same, and the underlying causes are the same. The Federal budget continues unbalanced, with action upon it waiting the new Administration; the agitation for inflationary policies or a change in the monetary standard has been revived; and intergovernmental debts are again disturbing interna-

tional relationships and prolonging the international currency disorder, which is stifling trade and pulling down values in all countries.

It is a common statement in this country, made most frequently by those who are proposing debasement of the currency as a way out of the depression, that the leaders of business have no program and are offering no leadership to promote recovery. If this charge means that the business leaders know of no way to end the depression in a manner to relieve people from the necessity of making readjustments, and legislators from political action they are loath to take, it is a correct one. But if it means that they are unaware of the nature of the obstacles to recovery and unwilling to state and support their views, it is incorrect, and the charge can only promote misunderstanding and harmful antagonism. Within the past month a committee of the Senate has solicited the views of a large number who may be described as business leaders, though they would be at a loss if asked what leadership, other than that of influence, they can exert outside of their own business; and there has been no lack of definiteness or agreement in their opinions. Nearly all have stressed the necessity of overcoming the alarm, and reviving the will to spend and invest, by dealing with the causes of the current fear and distrust. They have agreed that to balance the budget and place the Federal credit above all doubt, to repudiate the inflationary proposals, and to deal with the intergovernmental debts in a manner to assist in currency stabilization and the return to a common standard of value, are the measures that are essential above others to promote recovery.

Confidence, Not Money, Needed

The inflationists probably do not consider the foregoing a program, since it is simple in conception, lacks all aspect of the miraculous, and is politically difficult to achieve. But the lessons of other depressions and the experience in this one during 1932 alike indicate that there is no other way out. There is no lack of money in the country, or of banking reserves to support credit expansion, but neither money nor credit is circulating normally and nothing will make it circulate except confidence that will revive investment, and the restoration of balanced economic relationships that will revive trade. As long as it is not known how much more money the Federal Government will need, or when and on what terms the inevitable funding of the short-term Government debt into long-term obligations will begin, or to what extremes Federal appropriations will be carried, and as long as proposals to alter the monetary standard are agitated, the revival of confidence that will set credit to circulating again is likely to be deferred.

One of the arguments given for inflation is that "everything else has been tried and nothing but expansion of the currency remains." But it is evident that this is a misstatement. The application of the most rigid economy in governmental expenditures, plus a balanced budget, has not been tried, though when there was hope of it a year ago business recovered vigorously. The settlement of international differences, lowering of trade barriers, and adjustment of intergovernmental payments to relieve the exchanges from strain during this abnormal period, have not been tried, though when the Lausanne conference last July gave hope of such an outcome business revival occurred in every country. Against this experience may be considered the effects of the inflationary proposals, agitated both one year ago and at the present time, which have contributed nothing but instability and have had no effect but to drive capital into idleness as long as the alarm lasts.

Beyond all doubt the way out of the conditions of today, which repeat the conditions of a year ago, is the way that brought the improvement a year ago, by taking action upon the situations which hold the keys to confidence and carrying forward the program of adjustment and orderly cooperation where difficulties have arisen. It is an obvious mistake to characterize this program as "die-hard" or deflationary, though that is an error made in some quarters. On the contrary, it is a program which promises improvement in prices, and quickly. Every business man of experience will agree that nothing would stimulate the markets more immediately and lastingly than a program of genuine governmental economy, balanced budgets, and debt adjustment, and the country looks hopefully to the new Administration for action along these lines.

Trade and Industrial Conditions

Trade and industry have been unable to make much headway against the unfavorable turn in the banking situation. Retail sales have continued below last year by about the same percentage as in other recent months, and business in the primary markets accordingly has continued dull. Building contracts awarded during the first 21 days of the month were at the low point of the depression. Steel operations have been steady, around 19 per cent of capacity. In textiles Spring business is developing slowly, and the trend has been toward curtailment, but mill operations are better than a year ago. The most favorable item in the news is the increase in retail automobile sales in January as compared with the same month last year. This is additional evidence, such as has been given earlier in wear-

ing apparel lines, that a point is reached where the satisfaction of necessary replacement demand, over all obstacles, halts business recession.

The commodity markets have made a more encouraging showing, with a larger number of the important staples firm or steady, including the chief farm products. Livestock, butter and some of the grains are higher than at the end of January, and silver has advanced sharply upon the proposals before Congress calling for purchases by the Government.

Money and Banking

The developments of the past month in the banking situation, coupled with a good deal of loose talk as to inflation, have had their effect upon public psychology, causing a revival in the internal demand for currency and enough weakness of the dollar in the foreign exchanges to lead to considerable exports and earmarking of gold for foreign account. As a result, the large excess of bank reserves, which has been a feature of the money market for the past six months, has been sharply reduced, and money rates have become firmer.

Following is a table showing the changes in money rates from the recent low points:

	Low	Latest
	Per Cent	
Call money	1	1
Time money	¼ — ¾	2½
Bankers' Acceptances—90 days*	⅜	1⅛
Commercial paper	1¼ — 1½	1¼ — 1½
Treasury issues, 1 yr.	0.125	0.43

*Asked.

Reflection of the above changes appeared in a rise in the cost of Government new financing, an offering of $100,000,000 91-day Treasury bills being taken on an average discount basis of 0.99 per cent, compared with a low of 0.09 per cent on a comparable issue a few weeks ago.

Indications of a reversal of the previous tendencies in money appeared as early as the middle of January. At that time a revival of bank troubles at various interior points checked the seasonal decline of money in circulation and turned the curve of currency demand upward. During February the demand for currency increased more rapidly, until by the end of the month the total of money outstanding was $400,000,000 above the January low point, and higher than ever before.

Accompanying these increased demands for circulating medium, the tide of the gold movement, which had been running heavily in favor of this country, was likewise reversed. In the five weeks ended February 21 total monetary stocks, which include gold in the Treasury, all banks and in circulation, declined by $106,000,000, while gold reserves held by the Federal Reserve Banks fell off by a somewhat larger figure, or $118,000,000.

Due to these combined demands for currency and gold, the cash balances of the member banks at the Federal Reserve Banks dropped $303,000,000 between January 11 and February 21. At the same time, there was a strong movement of funds out of New York City as interior banks recalled balances for the purpose of fortifying themselves at home against possible emergency. As a result both of interior withdrawals and of the gold exports and earmarkings, the brunt of the reduction of reserves was borne by New York while nearly all of the other Federal Reserve districts showed increases. Following is a table comparing the changes in member bank reserves carried at Federal Reserve Banks, by Federal Reserve districts:

Member Bank Reserves With Federal Reserve Banks
(Millions of Dollars)

District	Jan. 11, 1933	Feb. 21, 1933	Change
Boston	135	154	+ 19
New York	1,301	939	—362
Philadelphia	128	120	— 8
Cleveland	142	137	— 5
Richmond	52	55	+ 3
Atlanta	45	45	0
Chicago	415	421	+ 6
St. Louis	60	61	+ 1
Minneapolis	37	46	+ 9
Kansas City	66	84	+ 18
Dallas	47	53	+ 6
San Francisco	146	155	+ 9
Total	2,574	2,271	—303

The effect of these changes in actual reserves, coupled with changes in deposit liabilities, upon the aggregate total and distribution of excess reserves is shown by the following table giving the figures by groups of banks from January 11, when the aggregate total was at peak, to the latest available reporting date:

Reserves In Excess of Legal Requirements of Weekly Reporting Banks
(Millions of Dollars)

	New York City	Chicago (City)	Outside N.Y.C. and Chicago*	Grand Total*
Jan. 11	356	173	100	629
" 18	312	177	102	591
" 25	239	187	150	576
Feb. 1	179	179	134	492
" 8	156	173	171	500
" 15	29	161	149	339
" 21	59	186	147	392

*Partly estimated.

It will be seen that in a period of six weeks, excess reserves at New York dropped from a high point of $356,000,000 to a low of $29,000,000 on February 15, thence rising to $59,000,000 on the 21st. It will be understood, of course, that these are by no means low figures measured by ordinary standards. Normally, banks carry very little "excess", but aim to keep invested as fully as possible, knowing that in case of unexpected demands they can always strengthen their reserve position through recourse to the Federal Reserve Banks. During the past six months, however,

the volume of surplus reserves has been running so far above normal, owing to the general sluggishness of industry, that a drop even to the current levels marks a decided change in the situation.

Contrasting with the reduction of excess reserves at New York, excess reserves at Chicago have been sustained near the peak, while those for all other weekly reporting banks combined have shown a tendency to increase. This, of course, is in accord with the usual experience in time of credit pressure, when surplus bank funds normally carried in the New York market are withdrawn in large volume to meet possible local needs.

Reserve Bank Aid to the Market

To give support to the situation, and mitigate strain, the Federal Reserve Banks have pumped large amounts of Federal Reserve credit into the market, as shown by a rise of $281,000,000 in total Federal Reserve credit outstanding between the 1st and the 21st of February. This increase took the form of additional purchases of $70,000,000 of Government securities and $143,000,000 of bankers' acceptances, with the remainder of the increase accounted for by a rise of $58,000,000 in member bank rediscounting and by miscellaneous other minor advances to the market. At $2,351,000,000 on February 21, the volume of Federal Reserve credit outstanding was the highest since last September, before the rapid influx of gold had permitted the substantial reductions accomplished in the later months of the year.

That the Reserve Banks will continue to give aid in this manner is to be assumed, in view of the central banking tradition of lending freely in a crisis, and of the Reserve Banks' own declaration in January that their policy would be to maintain the volume of excess reserves at a substantial figure pending a definite improvement in the economic situation.

At 61.2 on February 21 the Federal Reserve ratio of reserves to Federal Reserve note and deposit liabilities combined was still above the low point of 56.2 touched last Summer. It was also more than 20 points above the legal minimum of 40 per cent gold against notes and 35 per cent reserve against deposits.

The 1932 Annual Reports

The conditions of unprecedented difficulty under which business was forced to operate during 1932 are fully reflected in earnings reports for the year that have been published during the past few weeks. It could hardly be expected, in view of the great decline in prices and the drop in output in some of the heavy industries to the volume of twenty years ago and more, that business as a whole would have much to show for the year after paying interest and taxes, charging off depreciation and setting up necessary reserves; and the reports so far available indicate that earnings fell short, by a narrow margin, of meeting these charges.

The accompanying tabulation gives results for 840 manufacturing and trading corporations having a net worth of approximately $16,059,000,000. Total profits of $430,000,000 were reported by 43 per cent of the companies, concentrated largely in the food products, tobacco, chemical and chain store lines, though with a scattering among other groups. Deficits totaling $445,000,000 were reported by 57 per cent of the companies, particularly those in the steel and other heavy industries. The net result was a deficit balance of $15,000,000, which compares with a net profit for the same group in 1931 of $559,000,000, in which year there were profits by 61 per cent of the companies totaling $807,000,000 and deficits by 39 per cent totaling $248,000,000.

Reduction of Costs, Inventories and Debts

Considering the progressive business difficulties of the past three years, the ability of nearly half of the corporations to readjust their production costs and other expenses sufficiently to still show a profit is extremely encouraging. As sales figures are not published by the majority of concerns, it is impossible to measure exactly the decline in gross that has occurred. A selected group comprising 50 of the more important companies taken from a variety of different industries, which do issue sales figures and are still operating at a profit, showed aggregate sales in 1929 of $3,094,000,000, and in 1932 of $2,125,000,000, a decline of 31 per cent. Net profits of these companies in the two years were $194,000,000 and $77,000,000 respectively, and the difference between sales and profits, composed of material cost, labor cost, other expenses, interest, depreciation and taxes, was decreased from $2,900,000,000 to $2,048,000,000, or by 29 per cent. Volume of sales is to a considerable extent beyond the control of the individual company, but the showing of this selected group demonstrates the necessity of attacking the budget of expenses and readjusting it so as to correspond with prevailing levels of income.

No less than 85 companies increased their profits during 1932 over those of 1931, or changed from a deficit to a profit, and there was an additional large number which operated at a loss both years but decreased the size of the deficit in 1932. Companies reporting increased profits were, for the most part, relatively small and unrepresentative, and were not confined to any particular industries.

Despite the general decline in earnings last year, a study of the published balance sheets

shows a high ratio of current assets to current liabilities, brought about by liquidation of accounts receivable and inventories and further reduction in accounts and notes payable. Holdings of cash and its equivalent have been well maintained.

The reduction of inventories confirms trade reports of low stocks of manufactured goods on hand. A group of 150 important corporations, having a combined net worth of $4,635,000,000, reduced merchandise inventories from $972,000,000 at the end of 1931 to $808,000,000 at the end of 1932. In 1929 the same companies had inventories of $1,312,000,000, so that the total reduction in three years was 38 per cent. The decline reflects both lower prices and the working down of stocks.

Another feature of the reports is the extent by which industry has been reducing its long-term as well as short-term debt. About one-third of this group of 150 companies had bonded debts totaling $597,000,000 at the end

INDUSTRIAL CORPORATION PROFITS FOR THE YEARS 1931 AND 1932

Net Profits Are Shown After Depreciation, Interest, Taxes, and Other Charges and Reserves, but Before Dividends.

Net Worth Includes Book Value of Outstanding Preferred and Common Stock and Surplus Account at Beginning of Each Year.

(In Thousands of Dollars)

No.	Industry	Net Profits Years 1931	Net Profits Years 1932	Per Cent Change	Net Worth January 1 1931	Net Worth January 1 1932	Per Cent Change	Per Cent Return 1931	Per Cent Return 1932
6	Agricultural Implements	D-$1,074	D-$12,267	....	$ 180,917	$ 169,405	— 6.4	......	......
12	Amusements	6,305	D- 11,346	....	292,923	279,056	— 4.7	2.2	......
23	Apparel	D- 3,346	D- 7,818	....	155,962	135,766	—12.9	......	......
12	Automobiles	93,757	D- 7,331	....	1,165,099	1,106,092	— 5.1	8.0	......
30	Auto Accessories	98	D- 10,671	....	170,370	152,724	—10.4	0.1	......
17	Bakery	38,627	27,160	—29.7	354,745	340,010	— 4.2	10.9	8.0
32	Building Materials	D- 2,875	D- 11,525	....	377,564	352,915	— 6.5	......	......
17	Chemicals	73,188	42,147	—42.4	802,087	774,965	— 3.4	9.1	5.4
10	Coal Mining	9,646	374	—96.1	229,171	226,412	— 1.2	4.2	0.2
13	Confectionery and Bevs.	19,339	13,259	—31.4	120,695	122,688	+ 1.7	16.0	10.8
33	Cotton Mills	D-12,116	D- 9,165	....	265,099	248,674	— 6.2	......	......
14	Drugs and Sundries	45,547	27,704	—39.2	268,573	278,844	+ 3.8	17.0	9.9
24	Electrical Equipment	D- 2,373	D- 18,148	....	362,965	344,254	— 5.2	......	......
6	Fertilizer	D- 1,239	D- 4,452	....	117,840	114,521	— 2.8	......	......
35	Food Products—Misc.	44,571	32,217	—27.7	622,785	591,830	— 5.0	7.2	5.4
12	Heating and Plumbing	D- 1,141	D- 1,815	....	68,589	58,560	—14.6	......	......
16	Household Goods	24,433	8,051	—67.0	178,759	186,655	+ 4.4	13.7	4.3
33	Iron and Steel	3,698	D-127,194	....	3,659,919	3,543,456	— 3.2	0.1	......
56	Machinery and Tools	D- 1,090	D- 22,158	....	344,779	321,948	— 6.6	......	......
18	Meat Packing	D- 9,216	D- 2,029	....	688,027	642,724	— 6.6	......	......
25	Mdse.—Chain Stores	85,775	53,507	—37.6	614,642	616,782	+ 0.3	14.0	8.7
14	Mdse.—Dept. Stores	D- 1,430	D- 8,493	....	153,014	140,565	— 8.1	......	......
3	Mdse.—Mail Order	12,278	D- 2,701	....	209,597	207,666	— 0.9	5.9	......
18	Mdse.—Wholesale, etc.	D- 6,995	D- 5,605	....	145,482	139,031	— 4.4	......	......
7	Mining, Copper	D- 5,084	D- 7,854	....	174,276	160,151	— 8.1	......	......
7	Mining, Other Non-ferrous	4,230	1,368	—67.7	323,713	258,285	—20.2	1.3	0.5
6	Office Equipment	D- 713	D- 5,117	....	100,524	93,566	— 6.9	......	......
7	Paint and Varnish	4,505	1,008	—77.6	98,625	95,347	— 3.3	4.6	1.1
21	Paper and Products	3,148	D- 865	....	215,402	209,702	— 2.6	1.5	......
23	Petroleum	D- 1,740	12,194	+	729,950	662,872	— 9.2	......	1.8
8	Petroleum Pipe Line	2,605	956	—63.3	41,389	41,189	— 0.5	6.3	2.3
16	Printing and Publishing	14,000	6,466	—53.8	114,813	110,535	— 3.7	12.2	5.8
14	Railway Equipment	D-11,558	D- 16,591	....	478,771	436,908	— 8.7	......	......
12	Real Estate	6,937	D- 294	....	166,289	145,374	—12.6	4.2	......
6	Restaurant Chains	1,021	D- 160	....	29,014	25,023	—13.8	3.5	......
14	Rubber Tires, etc.	D- 816	D- 3,028	....	419,364	358,301	—14.6	......	......
11	Shoes	13,388	4,715	—64.8	200,596	183,778	— 8.4	6.7	2.6
20	Silk and Hosiery	D- 2,612	D- 3,336	....	105,765	89.186	—15.7	......	......
8	Sugar—Cuban	D- 9,574	D- 11,041	....	109,910	93,414	—15.0	......	......
8	Sugar—Other	2,108	4,171	+97.9	82,120	81,607	— 0.6	2.6	5.1
22	Textile Products—Misc.	3,945	D- 9,422	....	225,849	215,379	— 4.6	1.7	......
20	Tobacco	79,469	73,386	— 7.7	546,859	554,539	+ 1.4	14.5	13.2
4	Wool	D- 3,693	D- 8,696	....	117,283	83,577	—28.7	......	......
79	Miscellaneous—Mfg.	34,969	4,086	—88.3	865,919	810,067	— 6.5	4.0	0.5
48	Miscellaneous—Services	10,369	1,004	—90.3	269,218	254,119	— 5.6	3.9	0.4
840	Total	$559,271	D-$15,349	....	$16,965,252	$16,059,002	— 5.3	3.3	......

D—Deficit.

of 1929, which had been reduced by payments at maturity, calls for redemption, purchases for sinking funds and purchases at discounts in the open market for retirement, to $586,-000,000 at the end of 1931 and to $521,000,000 at the end of 1932,—a 13 per cent reduction in three years. It will be seen that the liquidation of indebtedness during times of depression is practiced by corporations as well as by individuals.

The Trend in Different Industries

Of the 45 industrial classifications given, 18 show a net profit for last year and 27 a net deficit. Reports of 33 iron and steel companies, with a net worth of $3,543,000,000, including United States Steel Corporation, reflect the extremely low rate of steel production by a net deficit of $127,000,000, compared with a profit of $4,000,000 in 1931 and a profit of $169,000,000 in 1930. A similarly poor showing was reported by the other heavy industries, including machinery, agricultural implements, electrical equipment, railway equipment, etc.

Twelve automobile companies, with a net worth of $1,106,000,000, had a combined net deficit in 1932 of $7,000,000, compared with a net profit of $94,000,000 in 1931 and $161,-000,000 in 1930.

The petroleum industry furnished a notable exception to the general trend, the results of 23 companies engaged in production, refining and distribution changing from a deficit of $2,000,000 in 1931 to a net profit of $12,000,000 in 1932, the latter figure representing a return of 1.8 per cent on the $663,000,000 net worth. The more favorable showing last year was due to the termination of the long decline in prices of crude and refined products, combined with a decrease of only 10 per cent in the domestic consumption and exports of all oils.

The tobacco companies made an exceptional showing, with net profits of $73,000,000 in 1932, as compared with $79,000,000 in 1931.

The Gold Question

Unquestionably there is great interest in gold at the present time. There is interest to know in what manner, if at all, gold may be related to the world depression, and particularly whether in any way it has been a cause of the depression or is an obstacle to recovery.

In one sense gold obviously has a relationship to prices, viz.: that nearly all monetary systems have been based upon gold and their monetary units have been fixed in terms of gold. However, this would be true of any international monetary standard, and the first question therefore is whether it is desirable or not to have all monetary systems linked together by fixed relations to a common standard. The affirmative argument is that it gives a common basis for business transactions around the world. For example, when all of the countries were on the gold basis, the price of wheat on any market in this country could be readily compared with wheat prices in Winnipeg, Buenos Aires, Liverpool, Amsterdam, Antwerp, Hamburg, Paris, Odessa, Melbourne, Bombay, Yokohama, or any other important exporting or importing market. There was a definite and stable relationship between prices in all these markets, upon which contracts could be based. Prices in the several markets continually influenced each other, for arbitrage transactions (simultaneous buying and selling in different markets) in contracts for future delivery were carried on by dealers on all the important grain exchanges, and of course all exporting countries were in competition with each other for orders from the importing countries.

It is difficult to believe that any intelligent person who has understanding of monetary systems and is at all familiar with international trade can fail to realize the importance of having a common standard of value to which all monetary systems shall be related. If the benefits were not wholly appreciated when they were enjoyed the chaos of prices which has existed since one-half of the nations were forced off the gold basis should be convincing.

There are persons who in something like despair over the complications of world relationships are inclined to favor a policy of complete isolation, in order to be free of all dependence upon other countries and all influences from them, but such a policy would require such a prolonged disturbance of our present economic organization and do such violence not only to the logic of all economic relationships but to the natural trend of social progress that it need not have much attention. Differences in the natural resources of countries, including climate, in the inherited and acquired capabilities of the peoples and in industrial development, wealth and intellectual culture all afford the basis for mutually advantageous intercourse and exchange.

Are Price Fluctuations Since 1913 Chargeable to Gold?

Assuming that the people of all countries will desire again to have a common standard of value, it is important to know whether the violent price fluctuations since 1913 have been caused by gold, or by any attitude of the public toward gold that the public would not have held toward any other standard of value under the same circumstances. To illustrate the point, we refer to the affirmation rather common in these days that commodities buy gold as truly as gold buys commodities, and therefore that gold is priced in commodities as truly as commodities are priced in gold; from which

is drawn the conclusion that gold may be fluctuating at least as much as commodities, and finally the conclusion that gold has done all of the fluctuating. The last point is said to be proven by the fact that all other commodities and kinds of property have declined in terms of gold. This is said to amount to cumulative evidence that the origin of the price changes is in gold rather than in anything that has happened to every other kind of property. In truth it proves nothing of the kind.

It may be admitted that if a calf and a sheep are exchanged either one may be said to buy the other as truly as if the statement was reversed, but such a transaction bears little likeness to the relationship between money—of any kind—and other kinds of property. Money is the standard of value, the common denominator by which all values are compared and exchanged, also a convenient means of effecting the exchanges and finally, by reason of its general and ready availability, it is a store of value in itself. Nothing else holds such a position, and money holds it, not as favoritism to holders of money but for the common convenience and service. Mankind resorted to the use of money before the beginnings of history, and gold was one of the earliest kinds of money to have international currency. Abraham was ruler in a primitive society, where industry was simple and foreign trade small, but even then the principal hand trades were developed and the people exchanged services by means of money. The Book of Genesis says that Abraham was rich in cattle and in silver and gold. Moreover, it says that in the purchase of a burial lot for Sarah, Abraham in the presence of witnesses paid unto Ephron 400 shekels of silver, "current money with the merchant." And Moses in prescribing certain payments to be made defined the legal shekels to be "as of the shekel of the sanctuary," showing that there was an authoritative standard of value.

We need not stress the esteem in which the precious metals have been held since early times, but it is pertinent to say that the willingness of all peoples to receive them in exchange for their products or services was an important factor in the development of trade and intercourse, and surely is not to be disregarded in seeking agreement upon a world standard of value.

However, the point we emphasize is that money of any kind, by reason of its functions and the powers with which it is endowed by law holds in every country a position different in respect to ready availability from that of any other kind of property. The law gives it a fixed legal tender value in the payment of debt and it is the common basis of contractural relationships, tentative or formal. In short, the calf-sheep theory of the relationship between money and other property is refuted by the fact that the law makes money the standard of value. All of this, as before said, has been necessary in order that the complicated division of labor which characterizes modern industry could be developed. It does not signify, as often represented, that money is the original source of wealth or cause of trade, but that it is a very useful facility of trade, and, moreover, as the standard of value, is a form of wealth into which other values may be converted for security against price fluctuations. It affords a safety zone in times of confusion and alarm.

Evidently there is no inherent, motivating, force in gold or any other form of property to move prices up or down. Prices are an expression of agreement between buyers and sellers upon the strength of which property changes ownership. Their movements are so well understood that ordinarily there is little dissent to the general statement that they are controlled by the law of supply and demand, i.e., by the weight of market opinion expressed in offers and bids. If demand outweighs supply prices rise, if the reverse is true they decline. Obviously the human element in the situation is the controlling factor. Prices are registered in terms of money because that is the very function which the standard of value is instituted to perform, but responsibility is all with the human element. It is allowable as a convenient expression to speak of the rising or falling value of money, as we speak of the rising or setting sun, but such language should not be used to confuse thought as to the cause of price fluctuations. The real seat of instability is in human nature itself. It has its times of confidence, optimism and elation, also of discouragement, depression and pessimism; it has its aberrations, as when it goes to war, and its times of disorganization and confusion when all the lessons of the past seem to be forgotten; and all of these conditions are reflected in prices.

No matter what constituted the standard of value or the money in use, the human element with all its characteristics and peculiarities would control the movement of prices. When prices are rising the weight of influence is in favor of exchanging money for property; when they are falling it is the other way. When prices are rising, a strong inducement is held out for buying and for going into debt for that purpose, thus bringing credit—a new and man-controlled factor—into play as purchasing power. On the other hand, when prices are falling it means that owners are preferring to convert their holdings into money, or to pay their debts, and debts become an aggravating influence in the price movement. Amidst these opposing influences the standard of value is neutral, passive, acted upon. The general con-

ditions which affect prices in a crisis, such as over-expansion, excess of indebtedness, unbalanced relationships in the economic system, loss of confidence, etc., inevitably affect all prices in more or less degree, both directly and through the interdependence of all parts of the economic system, and prompt a general desire to convert other goods into money, if there is confidence in the latter. That this is so is not proof that the disturbance originated in the standard of value. The relationship of other commodities with gold is not with gold as a commodity but with gold as lawful money and the monetary standard.

The spasmodic mass movements to convert money and credit into property of various kinds, and again to convert property into money, disturb the normal operations of the law of supply and demand and upset the equilibrium of the economic system. Credit is the predominant factor in movements of the first-named class and the chief factor in the rising prices. On the other hand, credit is rapidly eliminated when prices are falling, not only because the basis for it is shrinking but because there is less desire to use it as sentiment about values undergoes change.

The normal use for money and credit is in production and trade—"trade" meaning an exchange of goods and services. In such use, money and credit are facilities, goods and services really paying for each other at market rates of exchange, mainly determined by relative costs measured in money. This exhibits the normal working of the price system, by which capital and labor are automatically distributed in the various industries and the complicated economic system is kept in balance.

All of these normal functions and relationships are thrown into disorder by the speculative rushes to buy the panicky rushes to sell, and by the violent fluctuations in the use of credit which are quite unrelated to the orderly processes of production and trade.

It would seem needless to add that such a state of disorder is not helped by proposals to change the money and all agreements in terms of money. The idea of changing the money from time to time to suit or conform to the varying states of popular emotion does not point to either monetary stability or price stability. Followed, up to final results, it would put an end not only to the use of credit but the use of money and forbid a social organization even as advanced as that of the time of Abraham.

The Quantity Theory of Money

The foregoing is not intended to affirm that changes may not or do not occur in the relative values of gold and commodities on account of influences arising on the side of gold and credit based upon gold. It is agreed that unless the supply of money available for bank reserves and for a circulating medium of exchange is adequate to handle the growing volume of business at a practically stable level of prices, business will be restricted with harmful results. We have already noted that credit, which supplements the service of money, is an important factor in prices, and that it is a man-controlled influence, which should be measured by itself in analyzing the influences affecting prices. If governments or banking systems regulated by law are at fault in the management of credit, blame does not belong to the standard of value.

The above discussion is simply intended to clear the way to the question whether or not there has been, is now or is likely to be in the early future, any lack of gold to serve as the standard of value and basis of bank credit.

Gold Production and Bank and Government Holdings, 1900-1932

The issue of this publication for September, 1932, contained a table showing the increase of the gold reserves of Central banks and governments from 1900 to 1932 by principal countries. We are giving herewith a more complete table, showing the total monetary stocks of gold of 48 countries, which comprise practically all of the commercial world, at the end of each year from 1913 to 1932, also figures for gold production, net gains of the western world from India and China, net change in supply of new gold, net change in the aggregate of monetary gold reserves, and the total of non-monetary demands in each year of that period. The non-monetary demands include net imports of gold into India and China, as recorded. The net exports from these countries are treated as new gold to the western banking world, such movements being unusual. Another column shows the annual percentage of change in the aggregate of monetary stocks. In order to complete the picture back to the beginning of the century, when the production was rising above $300,000,000 annually, we give the corresponding figures for 1900.

The dip in production which occurred during the war was due to an increase of mining costs, which not only made many low grade properties unprofitable, but discouraged prospecting and new mining enterprises. The low point in production was touched in 1922, when a miners' strike affected an important reduction in the Transvaal field. Since that year the trend has been upward, and with the decline of mining costs since 1930 the news from the mines has been sensational, production rising from $403,000,000 to $494,000,000, according to the preliminary estimate for 1932, or by approximately 22.5 per cent. The highest previous record was $470,000,000 in 1915.

GOLD: SUPPLY DEMAND AND STOCKS
(In Millions of Dollars)

Year	Gold Supplies Mine Output	Gold Supplies Released From India and China**	Total Year's Addition	Monetary Gold Stocks Total (48 Countries, Russia incl.)	Monetary Gold Stocks Change From Preceding Figures	Per Cent Change*	Demand Non-Monetary Uses (India, China)††
1900	254	—	254	2,029 †	+ 79		103
1913	460	4	464	4,857			220
1914	440	28	468	5,342	+485	+10.0	136
1915	470	12	482	6,236	+896	+16.8	89
1916	455	—	455	6,625	+387	+ 6.2	124
1917	421	—	421	7,139	+514	+ 7.8	185
1918	385	16	401	6,807	—332	— 4.7	84
1919	366	—	266	6,794	— 13	— .2	304
1920	333	15	348	7,238	+444	+ 6.5	124
1921	330	11	341	8,029	+791	+10.9	76
1922	319	—	319	8,402	+373	+ 4.6	207
1923	368	—	368	8,635	+233	+ 2.7	239
1924	393	—	393	8,956	+321	+ 3.7	251
1925	393	—	393	8,973	+ 17	+ .2	322
1926	400	2	402	9,209	+236	+ 2.6	185
1927	402	—	402	9,567	+358	+ 3.9	157
1928	407	—	407	10,026	+459	+ 4.8	175
1929	403	2	405	10,305	+279	+ 2.8	134
1930	431	10	441	10,915	+610	+ 5.9	113
1931	459	155	614	11,258	+343	+ 3.1	40
1932	494	220	714	11,920	+662	+ 5.9	40

* The average annual increase in gold stocks in the period 1900-1929 was 5.8 per cent; period 1913-1929, 4.8 per cent; 1929-1932, 5.0 per cent.
** This figure does not include gold released from private holdings in other countries, notably Australia, Russia, United Kingdom, France, etc., for which definite figures are not available, although the aggregate is important.
† Director of the Mint, Stocks in 15 principal countries (F.R.B., February, 1919).
†† Estimates by late Joseph Kitchin (The Review of Economic Statistics, August, 1932).
Authorities: Monetary gold stocks and gold released by India and China: Federal Reserve Bulletins; Gold Output: Reports of the Director of the Mint: Non-Monetary Demand for gold: League of Nations, Interim Report of the Gold Delegation; Production Est. for 1932: American Bureau for Metal Statistics.

Prospect for the Future

In any review of world gold production in the last fifty years, or discussion of prospects, The Transvaal of South Africa with its great Rand field looms large. It has been the leading producer since 1900, and has made a new record in each of the last eight years. It is now producing more than one-half of the total and for this reason, and because it has been producing for a long time, concern has been aroused in recent years by predictions that it would soon begin to show a decline. However, the field has been extended from time to time by exploration, and mining costs have been steadily reduced, bringing in new reserves of payable ore. In the last year promising developments have occurred in a new extension, pay ore being found in a formation which is said to show an outcrop for forty miles. Much more exploration work will be necessary to determine the value of this find, but opinion regarding the future of the Rand is more hopeful than it was several years ago. The output in January, 1933, was substantially larger than for that month last year, which itself was a new record.

The Government is a large owner of proven ground adjacent to properties in operation, and this ground presumably will be exploited gradually. The mines are bearing a burden of taxation which may have to be reduced in order that low grade ores may be profitably worked, but it is assumed that the government will not kill the goose that lays golden eggs so long as any laying capacity remains.

Another interesting development of recent date is the departure of the Union of South Africa from the gold standard. The mining companies have been favorable to the adoption of the sterling standard, for the obvious reason that unless they are compelled to advance wage-rates in corresponding degree they will gain by selling their product at a premium while continuing to pay the same wage rates in the depreciated currency. The labor organizations have opposed the change and the party in power has resolutely opposed it, but a defection from that party on this issue, backed by the farming element, influenced by the low prices of farm products, has compelled the government to give way. The mine owners represent that wages were largely increased during the war, on account of the rise of living costs, but have not been correspondingly reduced since living costs have fallen, and that all interests depending on the industry will gain by lower operating costs. The Johannesburg correspondent of the London Times in a recent dispatch describes the situation as follows:

> The abandonment of the gold standard will enable the mines to reduce costs of production and work immense tonnages of low-grade ore hitherto lying fallow in the mines. Increased attention will be devoted to the possibility of opening up new areas. This will apply not only to the Witwatersrand but

to various outside districts of the Transvaal. The prospects of large low-grade gold-bearing areas, where only a very limited amount of work and exploitation has been possible in the past, will be improved, and other branches of the mining industry will stand to gain materially by the departure from the gold standard. Present operations should expand, and enterprises that have been closed down will have a chance of restarting.

Obviously the effect upon mining will depend upon whether or not operating costs actually are reduced in relation to the value of the product. The miners' union has made a demand for a wage increase of 35 per cent.

Canada and Other Countries

Next to South Africa, Canada is the largest producer, having come up from $16,000,000 in 1913 to $63,000,000 in 1932 and taken second place from the United States. Engineers in position to be informed are predicting $70,000,000 in 1933 and $100,000,000 within five years. Some of them believe that Canada will be ready to take the place of South Africa by the time the latter begins to seriously fail. It is to be said of the Canadian prospects that gold is being found in scattered localities over a great area of territory, which is suggestive of large possibilities.

There is reason to believe that Russia has large possibilities. The January number of "Economic Review of the Soviet Union," an official publication, has an extended article upon the gold-mining industry which describes vigorous operations in a number of mining fields and says that the aim is to raise the output by 1937 to approach the level of Transvaal production. Sir George Paish, the English economist, in an article published last year made the statement that "had it not been for the war, Russia today probably would be producing gold on a scale that would remove all anxiety as to future supplies of the metal."

Not much that is definite is to be said of other producers. Australia has promising developments, a pretentious announcement has come from Kenya, while the Belgian Congo, West Africa, Borneo, the Philippine Islands and the Boliden mine in Sweden are becoming more important.

One source of gold production, the base metal mines in which gold is a by-product of not sufficient value to sustain operating costs at the low prices ruling for the principal products, copper, lead and zinc, has been down for the last three years and may be expected to show an increase with the return of more normal business conditions.

One of the interesting things reported about the Boliden mine has been that the ore body was located under a heavy over-burden by a geo-physical device sensitive to the presence of minerals. The new Rand extension is reported to have been located by the same method. Geo-physical methods are said to have been successfully used in this country in recent years for the location of oil deposits.

Whether there proves to be much or little in the geo-physical method, general conditions now are favorable to an increasing production of gold for some years to come. The costs of mining and prospecting are much lower than since 1914, gold is in demand, measured by its exchange value in commodities, interest in gold mining is revived, and capital is available for exploration and development.

Net Additions to Monetary Gold Stocks

The net addition to the gold reserves of Central banks and governments in the last two years appears to have been about $1,000,000,000, and it is estimated that about $500,000,000 has been lost to hoarding temporarily, on account of the abnormal financial conditions. No such addition to the bank reserves ever has occurred in any other two years of the world's history. Moreover, there is reasonable assurance that the accumulation will continue at no less rate, and probably a higher rate, in 1933. The yield of the mines may be expected to go above $500,000,000, the flow from Asia is likely to continue, and there is the estimated sum of $500,000,000 which with the return of normal conditions may be recovered from hoards.

The most important factor counteracting the effect upon bank reserves of declining production during the war and years following was the additions resulting from the abandonment of the use of gold coin in circulation. Before the war the Director of the Mint estimated that approximately $3,000,000,000 of gold coin was in circulation in Europe. When these nations suspended gold payments paper money was substituted for these coins, and the latter were bought in at a premium by the Central banks, thus causing a building-up of reserves which would not have been possible from mine production alone.

The European nations all became accustomed to the use of paper money during the war and gold coin has not entered into circulation to any important extent since. The gain to the banking reserves as a result of this change of practice can be readily computed from the above table. In the twelve years ended with 1912 world gold production aggregated $4,711,000,000, and the increase in banking reserves was $2,222,000,000, or about 47 per cent of the new product, while in the twelve years ended with 1930 production aggregated $4,531,000,000 and the increase in the gold reserves was $4,108,000,000, or about 90 per cent of the new product.

The Relation of Money to Prices

The first table above shows that the average compound rate of increase in gold reserves

over the entire period from 1900 to 1929 was 5.8 per cent per annum. For the period 1913-1929 it was 4.8 per cent, and for the years 1929-1932 was 5.1 per cent. All of these rates are above any rate ever estimated for the average increase of the physical volume of business over a period of years. Professor Cassel has calculated that in the 60-year period 1850-1910 a uniform increase of gold production rising at the rate of 3 per cent per annum compounded would have given a stable price level. Moreover, it is to be noted that the above figures for the periods since 1900 are not for production but for net increases in bank reserves, and thus not subject to deductions for non-monetary uses or absorption in hand-to-hand circulation and private hoards.

Thus it appears that the average rates of gold production since 1900 and in recent years have been more than ample to sustain the price level, if a proportionate increase is sufficient. In fact, a proportionate increase in gold reserve may not be necessary to maintain the price level, for various influences may lessen the demands upon it. The quantitative theory of money is generally accepted, subject to qualifications. As authoritatively stated, it is in substance that "other things remaining the same" the general level of prices will be determined by the volume of money, but it is also generally conceded that the "other things" are always undergoing change.

Most economists agree that there is no disturbance from falling prices which result from improvements in the methods of production. Indeed, a very strong argument is made for the proposition that in no other way can the benefits of such improvements be so broadly and justly distributed as by having prices to consumers fall in correspondence with the increasing productivity of the industries. Increases in wages and salaries are uneven and more or less uncertain, but a decline of prices carries such gains direct to every consumer. Moreover, there is no need of artificial maintenance of prices when production costs are falling. A continuing reduction of labor costs is a characteristic of modern industry and has been a striking feature of the entire period covered by the above table. There is good authority for saying that during the eight years 1922-1929 the physical increase of productivity for the United States was at an average rate that would double the output per worker in about 29 years.* Such gains tend to lower costs and prices and enable an increasing physical volume of products to be handled without a corresponding increase of money.

*Over an eight-year period the American economy was moving forward at a rate perhaps never surpassed, a rate which represented a potential doubling of the physical income of the average citizen once every 29 years. For a period of almost a decade a rate of advance was achieved which gave promise of material comforts for the citizens at large on a broader scale than had ever been attained.—"Economic Tendencies," by Prof. Frederic C. Mills, Columbia University, page 310; published by National Bureau of Economic Research, Inc., 1932.

It is agreed that the quantitative theory of money must recognize the fact that credit, whether used in the form of lawful currency or of bank deposits transferable by check, answers the purpose of a medium of exchange in the same manner as money and has the same influence upon prices; moreover, that the velocity of circulation, i. e., the rapidity or efficiency with which payments are effected, is an important factor in the volume of money required to handle a given volume of trade. The use of checks and the clearing system are of great service in facilitating payments, hence a highly developed banking system whose services are generally used by the people in effecting payments will enable a larger volume of business to be handled with less money and increased economy. To sum up, the price-level results from the combination of all influences bearing upon the equation between money-supply and the changing demands of business.

Efficiency of Money Varies

Thus the ratio of money in circulation to the volume of business being done varies in different countries and at different times, with the customs of the people and the character of the banking service. If a given amount of gold coin is put into circulation it will afford the means of making purchases of that amount, repeated according to the velocity of circulation. If, however, that same gold is kept in bank reserves, experience has demonstrated that many times this amount may be safely loaned, and used as purchasing power, with multiplied influence upon prices.

The most convincing way of proving the above statement is by giving the figures for the actual increase of gold and bank credit in the United States from June 30, 1922 to June 30, 1929, as shown by the reports of the Federal Reserve Board and Comptroller of the Currency. The table on the next page gives first the monetary gold stock; second, the loans and investments held by the member banks of the Reserve system, and then a corresponding showing for all the banks of the United States, including members and non-members of the reserve system. It should be said in explanation that banks operating under State charters and not members of the reserve system may keep such reserves as the State laws require in banks other than the Reserve banks, which results in what may be called a pyramid of deposits against one ultimate reserve. Or it may be called increasing the efficiency of the gold held by the Reserve system, which is practically a reserve for the whole country.

Change in Monetary Gold Stock and in Bank Loans and Investments, 1922-1929.

(In Thousands of Dollars)

	June 30, 1922	June 29, 1929	Total Increase	Per Cent Increase
Total Monetary Gold Stocks	$3,784,651	$4,324,351	†539,700	† 14.2
Loans and Investments—Member Banks	24,182,000	35,711,000	†11,529,000	† 47.7
Ratio Increase Loans and Investments to Gold				21.4 Times
Loans and Investments All Banks	39,956,000	58,474,000	†18,518,000	† 46.3
Ratio Increase Loans and Investments to Gold				34.4 Times

Source: Annual Report of the Federal Reserve Board.

It will be seen that when reckoned against the total loans and investments of all of the banks in the country the increase of purchasing power put into circulation during this period was 34.4 times the increase in the monetary stock.

This showing is clear proof of the superior efficiency of gold in the Federal Reserve banks, and in Central banks generally, in comparison with gold coin in circulation, as it was in many countries before the war.

The average aggregate sum of loans and investments of all banks in the United States in the decade 1900-1909 increased to the average of the 20-year period 1910-1929 at the rate of 7.1 per cent per annum compounded, and the increase from the average of the decade 1910-1919 to the average of the decade 1920-1929 was at the rate of 7.29 per cent, compounded. Thus in this country the increase of bank credit, which is the chief direct influence upon the price level, was a much higher rate than the increase of world monetary stocks as shown by the table.

The volume of bank credit in use evidently was sufficient to support the price level of the time, and the gold reserves were sufficient to support the bank credit, with the margin stated above.

Reserves Not Fully Used

However, the above does not tell all that is pertinent to this inquiry. The gold reserves of the United States from 1922 were not used to anywhere near their capacity. Throughout the period when real estate and stock exchange speculation was rampant the Reserve authorities were doing the best they could to restrict the use of credit for such purposes, and their reserve percentages were far above the required minimum.

The Federal Reserve Act requires the Reserve banks to maintain a minimum reserve of 40 per cent against outstanding currency notes and 35 per cent against their deposits. Obviously the minimum of combined reserve against both notes and deposits would always be less than 40 per cent of these combined liabilities. The twelve banks are required to publish a weekly consolidated statement of their assets and liabilities with a showing of their combined reserve, and the record shows that not once in the years under review did the combined reserve show a ratio under 60 per cent. The highest ratio reported during the eight-year period was 83 per cent, the lowest ratio was 61.6 per cent, and the average was 74.9 per cent.

Even yet we are not quite done with the demonstration that throughout this period the Federal Reserve system had a vast amount of lending power—or in other words, purchasing power—in reserve. A calculation shows that assuming the gold reserve used to approximately the limit, the volume of member bank deposits either in June, 1928, or June, 1929, might have been considerably more than doubled, provided eligible paper was available, and the deposits of all the banks of the country might have been doubled with a still larger margin, subject to the same proviso.

And still another possibility of important expansion remained. During that time, as a part of the Federal Reserve policy to control inflation, an important amount of United States Treasury gold certificates, representing dollar for dollar reserves, was kept in circulation, although Federal Reserve notes might have taken their place and a considerable surplus of lending power have been gained. Competent foreign interests calculated that the lending power of the Reserve banks might have been increased by as much as $1,000,000,000 by utilizing this gold to the extent of serving as a 50 per cent reserve.

No Scarcity of Money or Credit

Notwithstanding the efforts of the Reserve authorities in these years to restrict the excessive use of credit in speculation, it was well known that an important part of the credit expansion was so used. The high interest rates paid on the Stock Exchange attracted funds from many sources, bank depositors being an important source. Loans to members of the New York Stock Exchange rose to over $8,000,000,000, which was equal to 27.2 per cent of the total of commercial and collateral loans of all the banks, and the aggregate of speculative borrowings throughout the country for all kinds of operations of course was much larger. With due allowance for the legitimate function of speculation in the business of the country, it cannot be questioned that an important proportion of the credit so employed at that time served no useful purpose, but had adverse effects. The industries were supplied with credit at moderate rates and were operating close to capacity. Under these conditions it is probable that if more credit had been available the additional amount employed would have been used for

speculative rather than productive purposes and done harm rather than good.

In short, the gold reserves of this country were large enough to care amply for all the credit needs which the Reserve system was authorized to supply, while a very large amount of credit was available outside of the Reserve banks for operations not recognized by the reserve act as vital, and there still remained large unused reserves under the control of the Reserve authorities.

We submit that in view of the foregoing there is no basis for the representation that the depression was brought upon this country by a lack of credit facilities or a lack of gold to serve as a basis for either bank deposits or currency.

European Gold Holdings

It may be said that the surplus reserves of the United States signified maldistribution, with scarcity elsewhere, and there is some basis for saying so. The war and derangements of industry and trade resulting from the war were responsible for gold movements which could not have occurred under normal conditions. The losses, both direct and indirect, resulting from such derangements, should be charged up where they belong, to the interference of war with the highly complex and serviceable organization of modern economic society. The most important lesson of the depression is that war is an anachronism in modern life, not only on account of its savagery and direct costs, but because of the far-reaching disorganization which results in the economic system.

The action of the Reserve authorities in paying gold certificates into circulation instead of Reserve notes and of holding large reserves of gold out of use was criticised in Europe as a "sterilization" of gold, but it had defenders there. Professor Felix Mlynarski, of the University of Poland and a member of the Gold Delegation of the League of Nations, called attention to the practice at the time of many of the smaller Central banks in carrying large sums of foreign exchange. As a rule Central banks are authorized to carry a certain percentage of their legal reserves in foreign exchange, although this is not true of the Federal Reserve banks. In a valuable paper entitled "The Functioning of the Gold Standard" prepared for the Gold Delegation in 1931 Professor Mlynarski says:

> Foreign exchange as a component of the fundamental reserve—according to Cassel and his adherents—is as good as gold. * * * By including foreign exchange in its fundamental reserve, the Bank raises its reserve ratio against its liabilities and can increase the amount of credit, since credit is granted on the basis of reserves.
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> The reserves of gold in the Central Banks of Europe (excluding Lithuania, Esthonia and Danzig) at the end of 1925 amounted to 3,231.9 million dollars. By the end of 1929 these reserves had increased to 4,751 million dollars. Over this period of four years the increase amounted to 47 per cent, or about 12 per cent yearly. The combined reserves of gold and foreign exchange increased from 3,948.5 million dollars at the end of 1925 to 6,969.4 million dollars at the end of 1929. The increase for the period of four years amounted to 76.5 per cent, or about 19 per cent yearly. In the face of such figures, the fact that a sterilization of gold is practised by some Central Banks from time to time is deprived of any real significance.

This statement indicates that Continental Europe was by no means completely starved for gold in the years preceding 1929. Countries of the debtor class and dependent mainly upon agriculture have suffered severely since then, on account of the world-wide disparity of prices between agricultural prices and other prices, but if gold was the controlling cause why should agricultural prices be depressed more than others? Evidently other influences have been present.

In countries where the gold unit was devalued to correspond with the depreciation of the old currency and rise of prices, as in Belgium, France, Italy, the nations formed from the Austrian empire and others, the gold reserves were multiplied in monetary value, and no increased demand for gold resulted from the rise of prices.

Long-Term and Short-Term Price Movements

Professor Gustav Cassel, the eminent economist of the University of Stockholm, is a leading exponent of the theory that the price-level over the long run is controlled by the supply of money and credit, but he warns against attempting to apply it to yearly conditions. Discussing gold production and price movements over the sixty years 1850-1910 he says:

> Thus we have to compare two curves, of which one represents the relative gold suply and the other the general level of gold prices. It is then immediately shown that the latter curve contains sharp short-time fluctuations which have no counterpart at all in the very even curve representing the relative gold supply. These price fluctuations are easily recognized as connected with periods of prosperity and depression. We can immediately draw the conclusion that trade cycles have nothing to do with the supply of gold. Eliminating the corresponding short-time price fluctuations from the curve representing the general level of prices, we find a curve which corresponds to our curve of relative gold supply in a most striking manner. The conclusion is that the long-time variations of the general level of prices essentially depend upon variations in the relative gold supply—Minutes of Indian Currency Commission, 1926.

The substance of this is that the long-time trend may be for a time subordinate to fluctuations due to the business cycle or other temporary influences. The war was a disturbing influence of tremendous importance, and the explanation of the present disorder is to be found in the effects of the war, rather than in the influence of gold. The seat of the disorder is in the disruption of price relations which prevents a normal flow of goods and services in trade. Some of these derangements have been discussed in previous numbers of this publication and will be reviewed further in following numbers.

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